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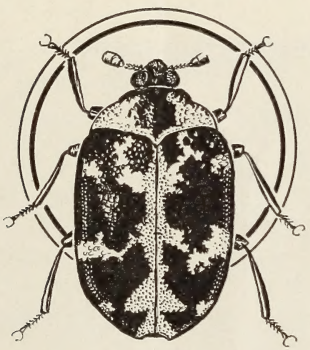
Carpet Beetles



Leaflet No. 150
U. S. DEPARTMENT OF AGRICULTURE

CARPET BEETLES

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Carpet beetles, sometimes called "buffalo moths", can cause great damage to house furnishings and clothing containing wool (fig. 1), hair, bristles (fig. 2), fur, feathers, and other animal substances. They can also subsist upon mealy or floury material. They do not normally eat wood and never weaken timbers. They do not spin webbing on the article attacked, as do some clothes moths. Because of their habit of entering wall spaces, where they may remain quietly for some time out of reach of the ordinary house-cleaning operations, they are even more difficult to control than clothes moths in many houses.

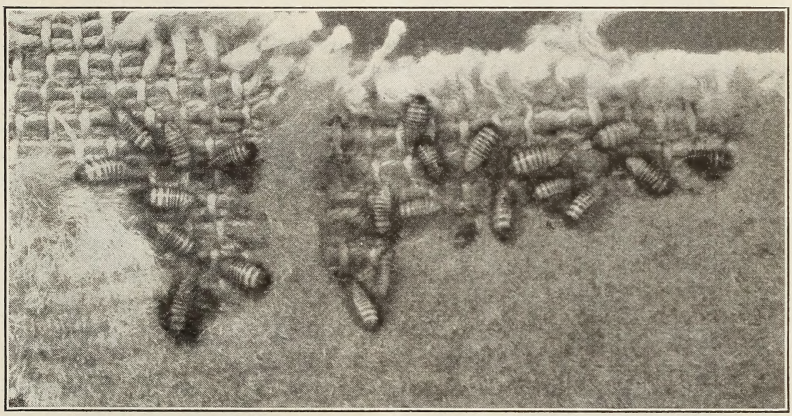

Figure 1.—Edge of a wool carpet being eaten by larvae of the carpet beetle. Note that the larvae are eating only the woolen pile, leaving untouched the vegetable fibers of the warp.

Kinds of Carpet Beetles

Four species of carpet beetles are commonly found in dwellings. They are the common carpet beetle (*Anthrenus scrophulariae* L.), the furniture carpet beetle (*A. vorax* Waterh.), the varied carpet beetle (*A. verbasci* L.), and the black carpet beetle (*Attagenus piceus* Oliv.). None of these, in any stage of growth, has a body length greater than about three-sixteenths to one-fourth of an inch, with the exception of very large specimens of the larvae of the black carpet beetle, which may shed skins half an inch long. The adults are hard-shelled beetles which are broadly or elongate oval.

The adult of the black carpet beetle (fig. 3) is uniformly blackish, with brownish legs. The others have blackish or brownish bodies, but their body color is concealed by a dense covering of small scales so colored as to form designs that are helpful in separating the

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species. Adults of the common carpet beetle (fig. 4) have a dull-reddish band extending down the center of the back. The adults of the furniture carpet beetle (fig. 5) are mottled with patches of white, yellow, and black in varying design, and are white underneath. The adults of the varied carpet beetle (fig. 6) are smaller on an average

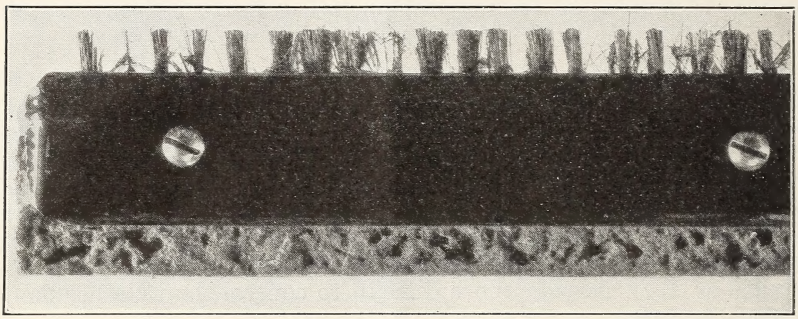

FIGURE 2.—Portion of a vacuum cleaner, showing the bristles of the brush on one edge and the felt on the other edge badly eaten by carpet beetle larvae.

than those of the other species; they resemble the furniture carpet beetle in that they are broadly oval and mottled, but they have scales of less brilliancy.

The larvae, or grubs, of all these species, except the black carpet beetle, are more or less oval in shape. The larvae of the common carpet beetle and those of the furniture carpet beetle (fig. 7) are

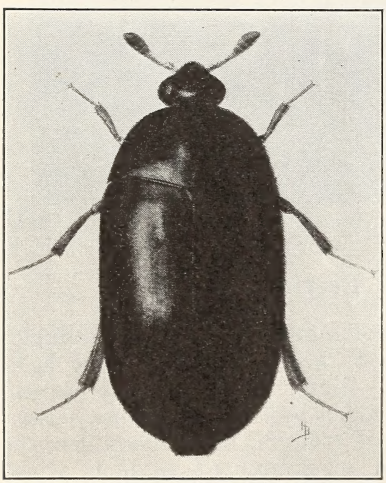

FIGURE 3.—Adult of the black carpet beetle. Fourteen times natural size.

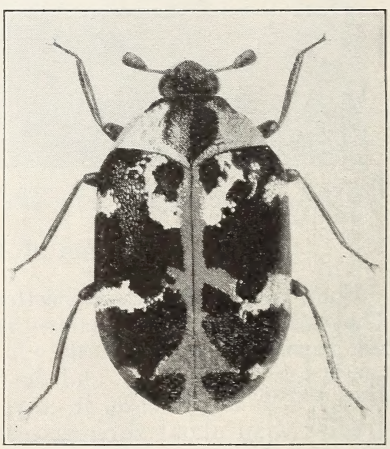

FIGURE 4.—Adult of the common carpet beetle. Fourteen times natural size.

much alike, and their black bristles give a blackish cast to their whitish bodies. The larva of the varied carpet beetle (fig. 8) has a brownish or tawny appearance. The larvae of all three of these carpet beetles have three tufts of bristles on each side at the rear end of the body which normally lie flat against the sides of the body. The larva of the black carpet beetle (fig. 9) is the only one

that is easily distinguished at a glance from the other species; it is golden, yellowish or chocolate brown, elongated, with a tuft of long brown hairs at the end of its body.

Development and Habits

Carpet beetles pass through the four usual stages of insect development—egg, larva, pupa, and adult. The adult beetles fly readily, are attracted to daylight, and are often found crawling on window sills. They like sunlight and are frequently seen out of doors late in the spring feeding on the pollen of flowers. In city areas they undoubtedly fly from house to house on hot days. In a house a female seldom lays more than 100 eggs, which are placed in all sorts of situations, such as floor cracks, about baseboards, and in the pile of clothing and furniture covers.

FIGURE 5.—Adult of the furniture carpet beetle. Twelve times natural size.

FIGURE 6.—Adult of the varied carpet beetle. Seventeen times natural size.

The adults may live several months, but often do not live more than 2 weeks if actively engaged in egg laying.

In warm weather the soft white eggs hatch in from 8 to 15 days. The young larvae immediately begin to feed and steadily increase their capacity for injury until they become mature (figs. 1, 7, 8, and 9) and transform to the pupal state. This growth requires (for most individuals) about 1 year, during which time the larva sheds its skin from 6 to 10 or more times. These cast skins, or "shells", as they are sometimes called, are very numerous and often lead the housewife to believe that the infestation is far worse than it really is. Usually there is only one generation of carpet beetles in a year, but occasionally two generations are produced. The larvae, unlike the adults, shun the light and secrete themselves in darkened places, particularly in articles long in storage and about the edges of carpeting and beneath baseboards. Only the larvae or grubs of carpet beetles cause damage.

Molting Habits and Their Effect on Control

Carpet beetle larvae increase in size by molting or shedding the old skin. After molting, the larvae eat voraciously, but when ready

to molt or when about to transform to pupae they stop feeding and may crawl far from their food. They crawl behind baseboards and quarter rounds and into wall and floor spaces, where sometimes they may assemble in groups (fig. 10). In these hidden spots they are unmolested by housecleaning operations and very often are beyond the reach of sprays and fumigants. After the molting process is completed the larvae again seek food in the room, and this explains why some carpet beetles may be found a few days after a room has been properly sprayed or fumigated.

Control

The control of carpet beetles is not difficult in storage units that are tight, but when infestations throughout a house are of long standing only peristence in continuing the application of remedial measures will stamp them out. Carpet beetle control will result in the control of clothes moths, as clothes moths and carpet beetles have very much the same food habits.

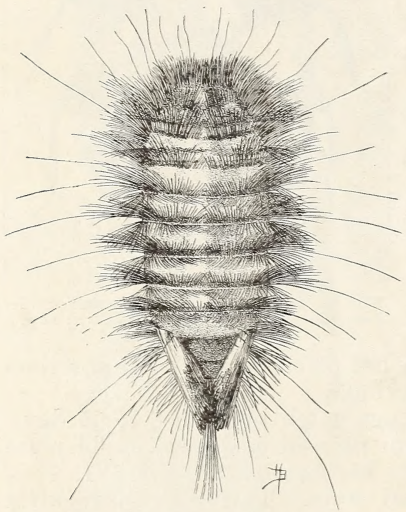

FIGURE 7.—Mature larva of the furniture carpet beetle. Twelve times natural size.

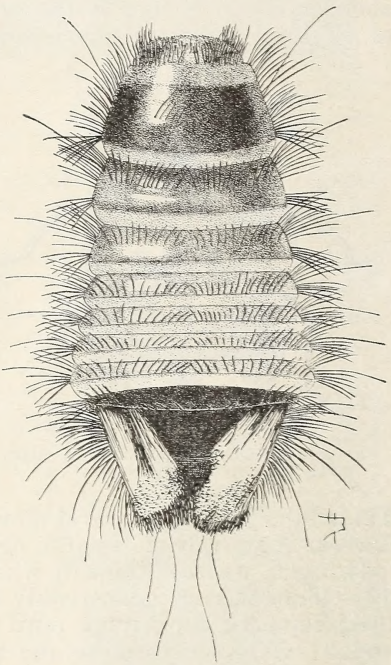

FIGURE 8.—Mature larva of the varied carpet beetle. Fourteen times natural size.

Naphthalene or paradiochlorobenzene.—When clothing is stored in tight trunks, boxes, or closets, protection against carpet beetles can be secured cheaply by using flake naphthalene or paradichlorobenzene crystals. These should be used in trunks at the rate of about 1 pound for each trunkful of clothing and should be scattered between layers of thin paper placed at various levels in the clothing. In closets that are kept tightly closed, use either of these chemicals at the rate of about 1 pound for every 100 cubic feet of closet space.

Sprays.—Contact sprays such as the oil-pyrethrum sprays commonly found on the market are excellent for spraying floor cracks

and the spaces about the quarter rounds and baseboards. These sprays kill only the insects that are hit and are best applied by power sprayers in the hands of a pest-control operator, although hand sprayers accomplish much good. Persistence in the application of a

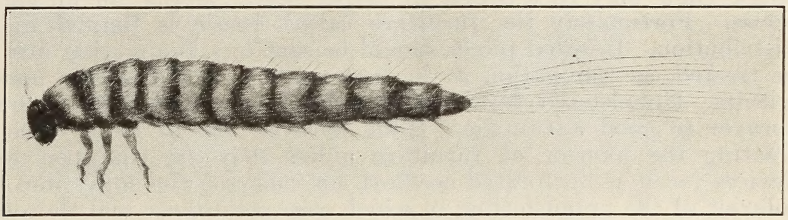

FIGURE 9.—Well-grown larva of the black carpet beetle. Ten times natural size.

contact spray, in addition to the frequent cleaning of rugs on both sides, will ultimately eliminate carpet beetles.

Manipulation of carpeting.—Carpet beetle increase is aided by carpeting that covers the entire floor. If the carpeting extends only to within 12 to 18 inches of the walls, the edges can be cleaned fre-

FIGURE 10.—View of the rear of a mantel, showing an accumulation of cast larval skins. Carpet beetle larvae molt in protected places, sometimes, as in this case, where they are out of reach of sprays.

quently and the carpet beetle larvae removed in the cleaning process. Carpets tacked down favor insect increase. Both sides of the edges of carpeting should be vacuum-cleaned or swept frequently. Carpets to be stored should be thoroughly cleaned on both sides, well covered with flake naphthalene or paradichlorobenzene, and rolled tightly. It is better to wrap rug rolls well in unbroken paper extending over

the ends so that it can be turned back several times to prevent the entry of insects at the ends of the rug.

Treatment of furniture.—Upholstered furniture containing hair is sometimes badly infested with the furniture carpet beetle, and a single chair may be a source of carpet beetle supply for an entire house. Fortunately the furniture carpet beetle is limited in its distribution. Infested pieces should be sent to a fumigating firm to be treated, as fumigation is the best method of killing the insects within. Upholstered furniture can also be sprayed with a power sprayer to good advantage. Hand sprayers are of little value in treating the interior of furniture unless they are equipped with devices (such as perforated needles) for carrying the spray into the interior of the upholstering, in which case persistence and thorough treatment can be depended upon to eliminate infestations.

Fumigation of the entire house or of a single room.—The fumigation of an entire house, or of a single room, is the best method known to reduce carpet beetles quickly and often serves to stamp them out completely. If the infestation is of long standing and the construction of the house furnishes hiding places for the insects in wall and floor spaces where fumigants do not penetrate well, some few insects may reenter the room later, despite the fumigator's efforts. Proper fumigation will kill all carpet beetles that are in the room space at the time of the treatment. Since fumigation requires the use of poisonous gases, it is advisable to secure the services of professional fumigators to conduct it.

Brushing and vacuum treatments.—Frequent brushing and vacuum-cleaning of clothing, rugs, and other susceptible articles remove many carpet beetle larvae, and if the dust is taken promptly from the house, or burned, much good is done.

Good housekeeping.—In combating carpet beetles, nothing is more effective, aside from fumigation, than the persistent use of a spray about the baseboards, the quarter round, and floor cracks, and the vacuum-cleaning of floor coverings on both sides, particularly along the edges. Dust and lint should be removed from beneath the quarter round where it is loosely fitted to the baseboard. Filling floor cracks and the cracks about baseboards with a good crack filler eliminates hiding places, makes house cleaning simpler, and keeps the carpet beetles where they can be reached in the ordinary routine of good housekeeping.

Bushes about the house.—There is a very general belief that spirea and other flowering bushes planted about the house attract carpet beetles to it. Countless numbers of adults of the varied carpet beetle (but very few of the other species) can be seen clustering on the flowers of spirea and other ornamentals late in the spring or early in the summer. These beetles like sunshine and fly from the house when they can get out. There is no proof, however, that those seen on flowers find their way back into the house, and it seems safe for landscape architects and others to disregard the carpet beetles in planning the beautification of premises.

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